

A1
3. (Amended) An array of claim 1, wherein each polynucleotide probe of the plurality of polynucleotide probes is from about 50 to 300 nucleotides in length.

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NO CLEAR
VERSION
17. (Amended) An array of claim 1, [where the] wherein each polynucleotide probe of the plurality [of polynucleotide probe comprises sequence-tagged site (STS) tages] is prepared by amplification of genomic DNA or cDNA using a pair of primers that amplify the region corresponding to 3' untranslated sequence of a gene transcript.

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VERSION
18. (Amended) An array of claim 1, wherein [each] the array comprises a polynucleotide probe prepared by amplification of genomic DNA or cDNA [is amplified] using a primer pair selected from the group consisting of SEQ ID NOS. 1-2, 3-4, 5-6, 7-8, 9-10, 11-12, 13-14, 15-16, 17-18, 19-20, 21-22, 23-24, 25-26, 27-28, 29-30, 31-32, 33-34, 35-36, 37-38, 39-40, 41-42, 43-44, 45-46, 47-48, 49-50, 51-52, 53-54, 55-56, 57-58, 59-60, 61-62, 63-64, 65-66, and 67-68.

A2
19. (Amended) An array of claim 1 further comprising target polynucleotides corresponding to gene transcripts expressed in a subject, wherein the target polynucleotides are bound to the polynucleotide probes in form of stable target-probe hybridization complexes.

Please add the following new claims:

A³

--49. (New) An array comprising a plurality of polynucleotide probes immobilized on a solid support, wherein:

- (a) the plurality of polynucleotide probes corresponds to a multiplicity of gene transcripts and comprises at least 100 polynucleotides that are each complementary to a distinct gene transcript;
- (b) each polynucleotide probe of the plurality is localized to a predetermined region on the solid support;
- (c) each polynucleotide probe of the plurality is from about 50 to 500 nucleotides in length;
- (d) each polynucleotide probe of the plurality is complementary to only the 3' untranslated sequence of a gene transcript, said untranslated sequence having a defined chromosomal location.

50. (New) An array of claim 49, wherein each polynucleotide probe of the plurality of polynucleotide probes is from about 50 to 400 nucleotides in length.

51. (New) An array of claim 49, wherein each polynucleotide probe of the plurality of polynucleotide probes is from about 50 to 300 nucleotides in length.

52. (New) An array of claim 49, wherein the predetermined region comprises at least 2 single-stranded polynucleotides that are complementary to the same gene transcript.

53. (New) An array of claim 49, wherein the predetermined region comprises at least 100 single-stranded polynucleotides that are complementary to the same gene transcript.

54. (New) An array of claim 49, wherein the predetermined region comprises at least 2 single-stranded polynucleotides of identical sequences.

55. (New) An array of claim 49, wherein the predetermined region comprises at least 100 single-stranded polynucleotides of identical sequences.

56. (New) An array of claim 49, wherein the predetermined region has an average size ranging from about 0.01 cm² to about 1 cm².

57. (New) An array of claim 49, wherein the plurality of polynucleotide probes is immobilized to the solid support via a covalent linkage.

58. (New) An array of claim 49, wherein the solid support is flexible.

59. (New) An array of claim 49, wherein the solid support is rigid.

60. (New) An array of claim 49, further comprising a control probe.

61. (New) An array of claim 60, wherein the control probe is selected from the group consisting of normalization control probe, expression level control probe, and mismatch control probe.

62. (New) An array of claim 60, wherein control probe having sequences complementary to one or more constitutively expressed genes.

63. (New) An array of claim 49, wherein each polynucleotide probe of the plurality is prepared by amplification of genomic DNA or cDNA using a pair of primers that amplify the region corresponding to 3' untranslated sequence of a gene transcript.

64. (New) An array of claim 49 further comprising target polynucleotides corresponding to gene transcripts expressed in a subject, wherein the target polynucleotides are bound to the polynucleotide probes in form of stable target-probe hybridization complexes.

65. (New) An array of claim 64, wherein the target polynucleotides are conjugated with a detectable label selected from the group consisting of an enzyme, a radioactive and a luminescent substance.

66. (New) n array of claim 65, wherein the target polynucleotides are DNA or RNA molecules.

67. (New) An array of claim 19, wherein the target polynucleotides are cDNAs.

68. (New) The array of claim 49 wherein each polynucleotide probe of the array is complementary to only the 3' untranslated sequence of a gene transcript.--